LINUX AS A LOW-LATENCY, ROCK-STABLE LIVE PERFORMANCE SYSTEM

VERSATILE
With respect to “hardware” setups (pedals, multi-effects), a computer-based setup provides with almost infinite versatility (see examples on the listening kiosk).

With respect to other computer-based systems: jack-based software often follows the UNIX philosophy: do one thing well. This allows to select the exact set of components the system needs and makes it easy to include custom software in the mix.

MODEST HARDWARE REQUIREMENTS
The very modest system requirements of Linux allow to use lower-end computers with astonishing results.

In 2013, we’ve been mixing 4 musicians, each with a live looper and effects, on a 10-year-old computer (1.4Ghz Pentium M, 768MB RAM) with a (jack) latency of 4ms!

ROCK-STABLE
Once the system is properly configured, it is rock-stable. We’ve been using Linux in dozens of gigs for the last four years and the computer never had a single problem on stage (although we sometimes caused problems, e.g. by forgetting to launch the right session before playing a song...).

VERSIONING
The predominance of text-based config files unleashes the full power of version control systems. Commits, diffs and branches encourage to experiment without the fear of not being able to come back to a sound state.

NOT FOR THE FAINT OF HEART
Most distributions (even “audio” ones) fail to provide a real-time kernel.

Although many think we don’t need one, we were not able to achieve very low latencies (couple of ms) without it.

Downloading, patching and compiling a kernel is not for the average musician, though.

Even with a rt-kernel, configuring jack and getting to the point where you make sound takes more time and knowledge than most musicians are ready to invest (although many are attracted by the very reasonable price to get together a complete rig).

SESSION MANAGER
We’re still looking for a session manager that would suit our needs, including:

- gapless session switching
- midi- or osc-controllable
- no need for client-side support
- screen layout management

What we are using now: custom bash scripts.

We will probably end up writing our own session manager!

Les Chemins de Traverse is a collective of musicians, artists and researchers from a variety of backgrounds with a focus on sonic exploration and live performance. They cover a large musical territory from renaissance and baroque music to jazz, rock music and contemporary experimental noise. More often than not, they mix different styles and techniques - like in a weird chemical experiment that would produce nice colored fluids but might as well explode at any time.

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